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The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** MATTHEW S. RYSKOSKI

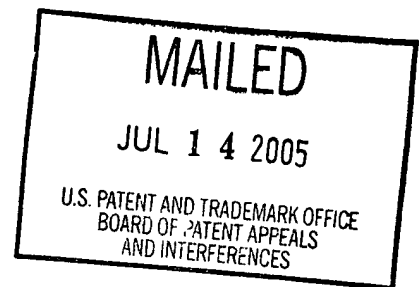
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Appeal No. 2005-0031  
Application No. 10/021,676

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ON BRIEF

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Before DIXON, LEVY, and NAPPI, **Administrative Patent Judges**.

DIXON, **Administrative Patent Judge**.

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1-41, which are all of the claims pending in this application.

We REVERSE.

Appellant's invention relates to a method and apparatus for scheduling production lots based on lot and tool health metrics. An understanding of the invention can be derived from a reading of exemplary claim 1<sup>1</sup>, which is reproduced below.

1. A method for scheduling production flow, comprising:  
  
processing a plurality of manufactured items in a process flow;  
  
determining item health metrics for at least a subset of the plurality of manufactured items;  
  
determining tool health metrics for a plurality of tools in the process flow;  
and  
scheduling the manufactured items for processing in the tools based on the item health metrics in view of the tool health metrics.

The prior art of record relied upon by the examiner in rejecting the appealed claims is as follows:

Nulman

6,456,894

Sep. 24, 2002  
(filed Jun. 1, 1999)

Claims 1-41 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nulman.

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<sup>1</sup> Here, we note that both the originally filed brief and the amended brief have the "original" claims rather than the amended claims which are for review. We note that neither the examiner nor appellant notice or indicate that the claims for review are incorrect. (See answer at page 2 and page 5; "Nulman considers both the product health and the tool health in the scheduling process.") (Emphasis added.) (Amended Appeal Brief at page 7; "Claims involved in this appeal.") Rather than remand the application for a corrected appendix and a clear statement by the examiner that the correct claims have been examined and considered, we will address the amended claims as argued in the amended brief in light of the examiner's broad response to arguments.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 11, mailed Dec. 15, 2003) for the examiner's reasoning in support of the rejections, and to appellant's amended brief (Paper No. 13, filed Jan. 15, 2004) and reply brief (Paper No. 12, filed Jan. 15, 2004) for appellant's arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art reference, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

At the outset, we note that appellant has elected to group the claims into four separate groups. (Amended Appeal Brief at page 3.) We will select a representative claim from each grouping and address appellant's separate arguments. Arguments not made in the brief are deemed to be waived.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. **See In re Rijckaert**, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. **See In re Lintner**, 458 F.2d

1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. **See In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. **See In re Warner**, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), **cert. denied**, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. **See, e.g., Grain Processing Corp. v. American Maize-Prods. Co.**, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in art would lead that individual to combine the relevant teachings of the references.'" **In re Lee**,

277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing **In re Fritch**, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" **In re Dembiczak**, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). "Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." **Dembiczak**, 175 F.3d at 999, 50 USPQ2d at 1617, citing **McElmurry v. Arkansas Power & Light Co.**, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) .

#### **CLAIM 1**

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Therefore, we look to the limitations set forth in independent claim 1. Here, we note that appellant has broadly recited determining both item health metrics and tool health metrics and "scheduling the manufactured items for processing in the tools based on the item health metrics in view of the tool health metrics." The examiner maintains that Nulman in view of the utilization of the well known concept of "yield" where too many manufactured items are not within their control limits render the claimed invention obvious. The examiner equates that an SPC is a measure of yield and that it would have been obvious to one of ordinary skill in the art at the time of the invention to have scheduled the manufactured items for

processing in the tools based on the yield and any determined maintenance with respect to tool health. (Answer at pages 3-4.) If the original language of independent claim 1 were present, we would find that the examiner had established a *prima facie* case of obviousness of the invention recited in independent claim 1. But, it is the amended claim that the examiner must address. Therefore, we look for the examiner's presentation of an argument to address "scheduling the manufactured items for processing in the tools based on the item health metrics in view of the tool health metrics" as recited in the language of amended independent claim 1 or for a convincing line of reasoning why it would have been obvious to one of ordinary skill in the art at the time of the invention to have scheduled the processing as claimed. We find no clear response by the examiner.

Appellant argues that the process control of Nulman is not a scheduling activity based on metrics and that a metric is a relative measure. We disagree with appellant and find that appellant's argument is not commensurate in scope with the language of independent claim 1. Appellant argues that identifying a problem with a tool or an item and adjusting the process or taking the tool out of service does not equate to determining a health metric for either the tool or the item. (See reply brief at page 3.) We disagree with appellant, and find no support for appellant's argument. Additionally, we find no specific definition of "metrics" and appellant has not identified any express

definition in the specification or definition recognized in the relevant art with which to further limit the interpretation. Therefore, we do not find appellant's argument persuasive.

Appellant argues that Nulman teaches the scheduling based on the tool availability and not based on a measure of the quality of the items being processed and a measure of the quality of the tools. The examiner maintains that Nulman teaches the use of both product health and tool health in the scheduling process. (Answer at pages 4-5.) While we agree with the examiner that both could be used, we do not find a clear teaching or suggest that both are used in combination as claimed.

Appellant argues that "Nulman does not teach or suggest 'scheduling the manufactured items for processing in the tools based on the item health metrics in view of the tool health metrics.'" (Amended Appeal Brief at page 4 and reply at page 2.) [Emphasis added.]

Appellant argues that inherently tool health relates to a relative measure of a tool's efficacy and that the purpose of determining tool health and scheduling based on item and tool health is to distinguish between available tools. (Amended Appeal Brief at page 4.) Appellant argues that from the above arguments, Nulman "teaches away" from appellant's invention. (Amended Appeal Brief at pages 4-5.) We disagree with appellant's argument about Nulman specifically teaching away. Appellant argues repeatedly throughout the reply brief that there is no consideration of the item health in

view of the tool health. Here, we agree with appellant and do not find that the examiner has addressed the specific language of amended independent claim 1. Therefore, we find that the examiner has not established a ***prima facie*** case of obviousness, and we cannot sustain the rejection of independent claim 1. Similarly, we cannot sustain the rejection of independent claims 21 and 41 for the same reasons.

### **CLAIM 2**

We select dependent claim 2 as the representative claim for this group. Appellant argues that claim 2 includes other features of the invention such as particular parameters used to determine item health and that the examiner has not addressed these limitations and had not established a ***prima facie*** case of obviousness. (Brief at page 5 and reply brief at page 3.) We disagree with appellant and find that the examiner's discussion of "yield" inherently addresses the measurement and determination of some facet of characteristics of a plurality of manufactured items. This would have been used in the determination of the item health metric. Therefore, this argument is not persuasive, but since dependent claim 2 includes those limitations not specifically addressed by the examiner with respect to independent claim 1, we will not sustain the examiner's rejection of dependent claim 2.



#### CLAIM 14

We select dependent claim 14 as the representative claim for this group. Appellant argues that claim 14 includes other features of the invention such as particular techniques for determining tool health and that the examiner has not addressed these limitations and has not established a *prima facie* case of obviousness. (Brief at page 5 and reply brief at page 3.) We agree with appellant that the examiner has not identified where Nulman teaches or fairly suggests the use of a tool state trace and tool health model in assessing tool health metric, and we do not readily find such a teaching or suggestion. Therefore, we agree with appellant that the examiner has not established a *prima facie* case obviousness of dependent claims 14-16 and 34-36, and we cannot sustain the rejection of dependent claims 14-16 and 34-36.

#### CLAIM 17

We select dependent claim 17 as the representative claim for this group. Appellant argues that claim 17 includes other features of the invention such as particular scheduling operations and that the examiner has not addressed these limitations and has not established a *prima facie* case of obviousness. (Brief at page 5 and reply brief at page 3.) We agree with appellant that the examiner has not identified where Nulman teaches or fairly suggests the use of particular scheduling operations, and we do not readily find such a teaching or suggestion. Therefore, we agree with appellant that the examiner has not established a *prima facie* case obviousness of dependent claims 17-


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20 and 37-40, and we cannot sustain the rejection of dependent claims 17-20 and 37-40.

### CONCLUSION

To summarize, the decision of the examiner to reject claims 1-41 under 35 U.S.C. § 103 is reversed.

**REVERSED**



JOSEPH L. DIXON  
Administrative Patent Judge



STUART S. LEVY  
Administrative Patent Judge



ROBERT E. NAPPI  
Administrative Patent Judge

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